

REMARKS

Claims 1 – 25 are pending in the instant application. Claims 1 – 5, 12, 15, 16, 19 – 22, and 24 have been amended, leaving Claims 1-25 for consideration upon entry of the present amendment. Applicants respectfully submit that the claims as presented are in condition for allowance. No new matter has been added by the amendments.

Support for Claim Amendments

The amendments are fully supported in Applicants' specification. See, for example, paragraphs 17 - 19, and FIGs. 1 and 2 of the specification.

Claim Rejections Under 35 U.S.C. § 102(e)

Claims 1, 3, 9-11, 16-18 and 20 stand rejected under 35 U.S.C. § 102(e) as being allegedly anticipated by U.S. Patent No. 6,397,224 to Zubeldia et al. (hereinafter "Zubeldia"). Applicants respectfully traverse the rejection because all of the elements in Claims 1, 3, 9-11, 16-18 and 20 are not found, either expressly or inherently described, in Zubeldia.

Claim 1, as amended, recites *inter alia* "creating said anonymous patient identifier corresponding to said patient, **wherein said anonymous patient identifier includes a linear transformation of a media access control address component, a date/time component and an anonymity supplement component**". As the Examiner conceded in regard to Claim 2, Zubeldia does not disclose that said anonymous patient identifier includes a linear transformation of a media access control address component. Furthermore, Zubeldia does not include each and every element as arranged in the claim, specifically "wherein said anonymous patient identifier includes a linear transformation of a media access control address component, a date/time component **and** an anonymity supplement component". The disclosure that an anonymization code may include a unique serial number (Zubeldia, col. 3, lines 2-3) or that records in prior art systems included a date of birth (Zubeldia, Background of Invention, col. 2, lines 18-21) does not anticipate the elements as arranged in Claim 1. Therefore, the rejection is improper and it should be withdrawn.

Zubeldia teaches a system for anonymously linking a plurality of data records. Subsets

of the identifying elements on a data record are encoded into encoded identity references 60. The encoded identity references 60 for a patient are matched to a common anonymization code 66 in an anonymization code database 68, which is separate from the input database 54 and the output database 84 (Zubeldia FIG. 2). Neither the encoded identity references 60 nor the anonymization codes 66 are stored in a database or record that also includes the identifying elements, as only the input database 54 contains identifying elements 56 (Zubeldia FIG. 2). Zubeldia teaches the input database 54 with a plurality of data records of the same type being “cleansed” of any patient identifying data (identifying elements 56) to create an output database 84 that can be utilized for reports and studies without compromising patient confidentiality requirements. (Zubeldia; Abstract, FIG. 2 and accompanying text).

Moreover, contrary to the Examiner’s assertion, Zubeldia does not teach “storing the anonymous patient identifier in the patient record” where “said patient record includes one or more of the patient identification data” as recited in Claim 1. In maintaining the rejection of Claim 1, the Examiner relies upon “[i]n another aspect, an anonymization code insertion module may insert the assigned anonymization code into the data record, while an identifying element removal module optionally removes the plurality of identifying elements from the data record, thus anonymizing or de-identifying the data record” (Zubeldia, col. 3, lines 22-28). Applicants respectfully submit that the Examiner has read this portion of Zubeldia out of context. The portion of the Summary of the Invention that the Examiner has relied upon is summarizing the removal of identifying elements 56 from input database 54 by module 78 followed by anonymization code insertion module 80, which inserts an anonymization code 66 into a data record, writing the result to the output database 84 (Zubeldia, FIG. 2). In rejecting “searching a patient record corresponding to said patient for an anonymous patient identifier wherein said patient record includes one or more of the patient identification data, said searching returns said anonymous patient identifier in response to locating said anonymous patient identifier and said searching returns a null value in response to not locating said anonymous patient identifier” as recited in Claim 1, the Examiner relies upon the search of the anonymization code database 68 as holding the anonymous patient identifier with a patient record including one or more of the patient identification data. This assertion is incorrect, and the Examiner has apparently misinterpreted the teachings relative to each database within Zubeldia (i.e., the anonymization code database 68, which is separate from the input database 54 and the output database 84).

Zubeldia teaches that the anonymization code database 68 is searched for encoded identity values 60A-B to determine an anonymization code 66, and “[o]nly the first and second encoded identity reference 60A-B and the corresponding anonymization code 66 are actually stored in the database 68” (Zubeldia, col. 10, lines 60-63). Since the anonymization code database 68 does not include patient identification data, Zubeldia cannot anticipate Claim 1; the rejection is improper and should be withdrawn.

Therefore, Claim 1 is not anticipated by Zubeldia for at least the reason that Zubeldia fails to disclose, either expressly or inherently, all of the elements of Claim 1. Thus, Claim 1 should be allowed.

Similarly, Claims 16 and 20 should be allowed because they contain similar elements as recited in Claim 1, “wherein said patient record includes one or more of the patient identification data”. Furthermore, Claims 16 and 20 as amended, recite “creating **and encrypting** said an anonymous patient identifier corresponding to said patient and **storing the said encrypted anonymous patient identifier in the patient record** if said searching returns said null value; unencrypting said encrypted anonymous patient identifier; **adding said unencrypted anonymous patient identifier to said medical report**”. Zubeldia does not store an anonymous patient identifier with data record 52 in the input database 54, where the identifying elements 56 reside. Zubeldia stores the same anonymization code 66 in both the anonymization code database 68 and the output database data record 82 in the output database 84 without encryption and unencryption (Zubeldia, FIG. 2 and col. 7, lines 64-66). Therefore, Zubeldia does not anticipate Claims 16 and 20, Claims 16 and 20 are allowable, and the rejections should be withdrawn.

Claims 3, and 9-11 depend from Claim 1, and thus are believed to be allowable at least due to their dependency on Claim 1. Claims 17-18 depend from Claim 16, and thus are allowable at least due to their dependency on Claim 16.

Claim Rejections Under 35 U.S.C. § 103(a)

Claims 2, 15, 19 and 21-25 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Zubeldia in view of U.S. Patent No. 6,157,617 to Brandin et al. (hereinafter

“Brandin”). Applicants respectfully traverse the rejection because Zubeldia in view of Brandin fails to teach or suggest all of the elements in Claims 2, 15, 19 and 21-25.

Brandin is directed to a method of network packet accounting that can account for bandwidth usage on a network without slowing down the network. (Brandin; Col. 1, lines 26-28). Network addresses and parameters associated with the packets (e.g., number of bytes in the packet) are extracted from the packets as they move through the network. These network addresses and parameters are then associated with accounts for accounting purposes. A group of addresses may be associated with a single account. The network addresses are forwarded to a transform generator (e.g., a linear feedback shift register) to determine an icon for the network address. The icon is used to look up the account information associated with the network address. (Brandin; Col. 2, lines 21-52.) Thus, Brandin teaches network accounting for packet switched networks.

As stated above, Zubeldia fails to disclose all of the elements of Claim 1, from which Claim 2 depends. In addition, Brandin fails to teach or suggest at least the elements “storing the anonymous patient identifier in the patient record” where “said patient record includes one or more of the patient identification data” and “wherein said anonymous patient identifier includes a linear transformation of a media access control address component, a date/time component and an anonymity supplement component” as recited in Claim 1.

Thus, Brandin does not cure the deficiencies of Zubeldia with respect to Claim 1. Accordingly, neither Zubeldia nor Brandin, alone or in combination, teach or suggest all of the elements of Claim 1. Applicants submit that Claim 2 is allowable at least due to its dependency on Claim 1. Furthermore, Claim 2 as amended recites, “wherein said anonymity supplement component **includes a random number and a constant**”. Neither Zubeldia nor Brandin, alone or in combination, teach or suggest all of the elements of amended Claim 2.

Further, Claims 15, 20 and 22 contain elements that are similar to the elements “storing the anonymous patient identifier in the patient record” where “said patient record includes one or more of the patient identification data” as recited in Claim 1, and are therefore patentable at for the same reasons that Claim 1 is patentable. Accordingly, neither Zubeldia nor Brandin, alone or in combination, teach or suggest all of the elements of Claims 15, 20 and 22. Claims 16 and 20

include further elements of “**creating and encrypting** said an anonymous patient identifier corresponding to said patient and **storing the said encrypted anonymous patient identifier in the patient record** if said searching returns said null value; unencrypting said encrypted anonymous patient identifier; **adding said unencrypted anonymous patient identifier to said medical report**” that neither Zubeldia nor Brandin, alone or in combination, teach or suggest, as previously discussed. Accordingly, Applicants submit that Claim 19 is allowable at least due to its dependency on claim 16, that Claim 21 is allowable at least due to its dependency on Claim 20, and that Claims 23-25 are allowable at least due to their dependency on Claim 22.

Further with respect to Claim 2, the Examiner looks to Column 2 lines 35-46 and lines 62-64 of Brandin for teaching “said anonymous patient identifier includes a linear transformation of a media access control address component” as recited in Claim 2. Applicants maintain that the reliance on Brandin is improper because Brandin is nonanalogous art, and there is no motivation to combine the references. See *In Re Wood*, 599 F2d 1032, 202 USPQ 171 (CCPA 1979). The Examiner has impermissibly used the Applicants’ disclosure as roadmap to combine the references to reject the claims, and thus has applied impermissible hindsight in the rejection. Applicants respectfully submit that the Examiner’s observation that a media access control address uniquely defines a network device fails to bridge the gap between combining a unique network device and patient identification. Zubeldia teaches that prior art systems held multiple patient identifiers such as a name, a date of birth, a telephone number, a ZIP code, and a patient code, and thus there was no need to look beyond this information to a network device identifier (Zubeldia, col. 2, lines 18-22; col. 6, lines 19-26). More specifically, the Examiner has relied on Brandin, which is in the network accounting art, in his rejection of the present invention, which is in the business application or data mining art. A person of ordinary skill in the business application or data mining art would not look to the network account art to solve the problem treated by the claimed invention. In addition, Brandin does not deal with the same problem solved by the claimed invention. Brandin is directed to solving a network accounting problem for packet switched networks, while the present invention is directed to anonymity in collecting patient data. In sum, Brandin is not in the field of technology of the claimed invention, nor does it deal with the same problem solved by the claimed invention. Accordingly, Brandin is nonanalogous art, and the Examiner’s reliance on Brandin is, therefore, improper. For at least this reason, the rejection of Claim 2 under 35 U.S.C. §103(a) is improper, and should be

reversed. In addition, the rejection of Claims 15, 19, and 21-25 should be reversed for at least the same reasons that the rejection of Claim 2 should be reversed.

Further regarding Claims 15 and 22, neither Zubeldia nor Brandin, alone or in combination, teach or suggest “receiving a date/time, **said date/time indicating when said patient data was created**” as recited in amended Claim 15 or “a patient identifier including a linear transformation of a date/time component, said date/time component **indicating when said patient data was created in said system**” as recited in amended Claim 22. The only date/time component taught within Zubeldia is a date of birth. Therefore, the rejection of Claims 15 and 22 should be withdrawn, and Claims 23-25 are allowable at least due to their dependency on Claim 22.

Claims 4-8 and 12-14 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Zubeldia in view of U.S. Patent No. 5,548,647 to Naik et al. (hereinafter “Naik”). Applicants respectfully traverse the rejection because Zubeldia in view of Naik fails to teach or suggest all of the elements in Claims 4-8 and 12-14.

As stated above, Zubeldia fails to disclose all of the elements of Claim 1, from which Claims 4-8 and 12-14 depend. In addition, Naik fails to teach or suggest at least the elements “storing the anonymous patient identifier in the patient record” where “said patient record includes one or more of the patient identification data”, as recited in Claim 1. Furthermore, neither Zubeldia nor Naik, alone or in combination, teach or suggest “creating said anonymous patient identifier corresponding to said patient, **wherein said anonymous patient identifier includes a linear transformation of a media access control address component, a date/time component and an anonymity supplement component**”, as recited in Claim 1. Therefore, Naik does not cure the deficiencies of Zubeldia with respect to Claim 1. Accordingly, neither Zubeldia nor Naik, alone or in combination, teach or suggest all of the elements of Claim 1. Applicants submit that Claims 4-8 and 12-14 are allowable at least due to their dependency on Claim 1.

Further, neither Zubeldia nor Naik, alone or in combination, teach or suggest “wherein said anonymity supplement component further includes a rotating number that is incremented between a minimum and a maximum value each time a new said anonymity supplement is

created, and returning to said minimum value when said rotating number is incremented to the maximum value”, as recited in Claim 4. The reference that the Examiner relies upon in Naik only discloses incrementing a number, not a **rotating number**. Therefore, Claim 4 is allowable, and the rejection should be withdrawn.

Further, with respect to Claims 4-8 and 12-14, the Examiner looks to Naik for teaching various elements of Claims 4-18 and 12-14. Applicants maintain that the reliance on Naik is improper because Naik is nonanalogous art, and there is no motivation to combine the references. See *In Re Wood*, 599 F2d 1032, 202 USPQ 171 (CCPA 1979). The Examiner has impermissibly used the Applicants’ disclosure as roadmap to combine the references to reject the claims, and thus has applied impermissible hindsight in the rejection. Applicants respectfully submit that the Examiner’s observation that a matrix is utilized in a linear transformation does not bridge the gap from creating anonymity in patient data and performing a linear transformation with a matrix. More specifically, the Examiner has relied on Naik, which is in the speech recognition art, in his rejection of the present invention, which is in the business application or data mining art. A person of ordinary skill in the business application or data mining art would not look to the speech recognition art to solve the problem treated by the claimed invention. In addition, Naik does not deal with the same problem solved by the claimed invention. Naik is directed to solving a verification of individual identity using speech and voice characteristics problem, while the present invention is directed to anonymity in collecting patient data. The linear transformation in Naik is performed as part of a filter bank in voice analysis. In sum, Naik is not in the field of technology of the claimed invention, nor does it deal with the same problem solved by the claimed invention. Accordingly, Naik is nonanalogous art, and the Examiner’s reliance on Naik is, therefore, improper. For at least this reason, the rejection of Claims 4-8 and 12-14 under 35 U.S.C. §103(a) is improper, and should be reversed.

Applicants further respectfully submit that the Examiner has used an improper standard in arriving at the rejections of the above claims under Section 103, based on improper hindsight which fails to consider the totality of Applicants’ invention and the totality of the cited references. More specifically, the Applicants submit that the Examiner has used Applicants’ disclosure to select portions of cited references to allegedly arrive at Applicants’ invention. In doing so, the Examiner has failed to consider the teachings of the references or Applicants’

invention as a whole in contravention of Section 103, including the disclosures of the references which teach away from Applicants' invention.

In applying Section 103, the U.S. Court of Appeals for the Federal Circuit has consistently held that one must consider both the invention and the prior art "as a whole", not from improper hindsight gained from consideration of the claimed invention. See, *Interconnect Planning Corp. v. Feil*, 227 U.S.P.Q. 543, 551 (Fed. Cir. 1985) and cases cited therein. According to the *Interconnect* court

"[n]ot only must the claimed invention as a whole be evaluated, but so must the references as a whole, so that their teachings are applied in the context of their significance to a technician at the time – a technician without our knowledge of the solution." *Id.*

When, as here, the Section 103 rejection was based on selective combination of the prior art references to allegedly render a subsequent invention obvious, "there must be some reason for the combination other than the hindsight gleaned from the invention itself." *Id.* Stated in another way, "[i]t is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious." *In re Fritch*, 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992). Applicants respectfully submit that the Examiner incorrectly assigns features to the prior art that they do not possess, and subsequently attempts to use the Applicants' teachings as a roadmap to reject the claims.

In considering the reference as a whole, there is no tenable reason expressed or implied that would motivate one skilled in the art to combine Zubeldia with Brandin or Naik. It is clear, however, that Applicants' disclosure provides the necessary teaching, while the prior art fails to suggest or provide incentive for one skilled in the art to combine the references. Applicants respectfully submit that it is improper for the Examiner to use the Applicants' specification as a road map to reject the claims. Accordingly, Applicants respectfully request that the Section 103 rejections be withdrawn, and that Claims 2, 4-8, 12-15, 19 and 21-25 be allowed.

Conclusion

It is believed that the foregoing amendments and remarks fully comply with the Final Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and allowance is requested. It is submitted that the foregoing amendments and remarks should render the case in condition for allowance.

If any issues remain, the Examiner is invited to contact the undersigned at the telephone number below.

If there are any charges with respect to this response or otherwise, please charge them to Deposit Account 07-0845 maintained by Applicants' attorneys.

Respectfully submitted,
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